

## Summary of IS 8749: 2002 - Biogas Stove

The Indian Standard **IS 8749: 2002** lays down the essential guidelines and technical specifications for biogas stoves used in households for cooking. This standard aims to ensure that biogas stoves are safe, efficient, and provide optimal performance while using biogas, a renewable energy source produced from organic waste.

The standard covers various aspects, starting with the construction and materials of the stove. It specifies that the stove should be made from materials that can withstand high temperatures and are resistant to corrosion caused by the composition of biogas. The components like the burner, gas pipes, and pan supports should be sturdy and durable to ensure the stove operates safely and lasts for a long time.

The design of the burner is a crucial part of this standard. It specifies how the burners should be constructed to ensure efficient combustion of biogas. The aim is to achieve stable flames that do not produce excess soot, ensuring clean and efficient cooking. Proper flame control mechanisms are also required to prevent gas leaks, adding an extra layer of safety for users.

In terms of performance, **IS 8749: 2002** emphasizes the importance of thermal efficiency. Biogas stoves should efficiently convert the energy in the gas into heat, minimizing fuel consumption while providing sufficient heat for cooking. Several tests are prescribed in the standard to check the stove's performance, including thermal efficiency tests, gas leakage checks, and flame stability tests. These tests ensure that the stoves meet safety and efficiency benchmarks before reaching consumers.

Additionally, the standard mandates that stoves must be marked with clear labels displaying the manufacturer's name, model number, and BIS Standard Mark. Instruction manuals with safety guidelines, installation instructions, and maintenance tips must also be provided with each stove.

By adhering to **IS 8749: 2002**, manufacturers can ensure that their biogas stoves not only meet safety requirements but also promote the use of renewable energy in an efficient way. For consumers, this means access to safer, more energy-efficient, and environmentally friendly cooking solutions.